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## ORIGINAL DEPARTMENT.

## LECTURES.

### Lectures on Orthopædic Surgery.

Delivered at the Brooklyn Medical and Surgical Institute.

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#### III.—*Deformities at the Hip-Joint.*

Gentlemen:—The construction of the hip-joint is very simple. Being a ball-and-socket joint, it moves freely in every direction, and hence its susceptibility to diverse malpositions.

From the valuable experiments of Weber, it seems conclusive that its firmness depends preeminently on atmospheric pressure. In motor paralysis, however, the joint becomes so very loose that the femur may be almost dislocated at will—a fact which obviously indicates that the muscles of the joint are co-operative in its firmness.

The deformities at the hip-joint arise chiefly from two causes, namely: paralysis with contractions, and diseases of the joint and its immediately adjacent structures. With the former we shall consume no more time, having already acquainted you with their pathological features and treatment as far as needed for strictly practical purposes. To enter more deeply upon a discussion of the latter we feel the strongest inducement, although the subject belongs strictly to another branch of surgery. Besides, we have already, in two different papers, expressed our special views on the pathology and treatment of hip disease, to which we might refer. A brief recapitulation of the most important points will, nevertheless, be acceptable, and we shall endeavor to keep within the boundary of our legitimate object.

With our researches, both literary and clinical, we have had a singular misfortune. Most surgeons have *totally ignored*, some have *studiously misunderstood* them; others have gone to the hard labor *of reproducing them without due acknowledgment* of their author, and but *few* have given us credit. Had our humble efforts been for selfish aim, we should feel sadly disappointed. As it is, we care but little. If we have succeeded in eliciting the true pathology of hip-joint disease, and essentially contributed to its rational and more successful treatment, the good we have wrought for science and art will assert its own position against petrified fogyism. It is, therefore, but a matter of time, and we can patiently wait. Some monographs have already issued forth on the subject, ingrafting, more or less, our views. The old dogmas are less vigorously urged by their former advocates, and the feasibility of treating "*tubercular and strumous hip disease*," with mechanical means, to advantage, is now seriously entertained. Thus some ground is already gained, and the progressive ferment is in full operation. But of late, the New York Academy of Medicine has given the subject its close attention in unusually animated discussions. Although some of the members still maintained the obsolete notions of the past with a tenacity worthy of a better cause, yet a close observer could not help noticing that a general change had already been wrought in the professional mind.

Most surgeons still ascribe to scrofulosis the cause of hip and other joint diseases. The fragmentary remarks made on various occasions will have intimated to you that we do not share in these general views. We are fully prepared to

show that the etiology of hip disease has no connection with tuberculosis, and that the existence of the latter itself has become totally questionable by more recent investigation.

We have reserved the special consideration of this subject for a future lecture, to which we beg to refer you. While we deny to tuberculosis any part in the causation of hip disease, we do not mean to imply that vitiated nutrition is entirely indifferent or perfectly harmless. Such an assertion would resolve itself into a plain absurdity, and be in direct contradiction with clinical experience. In contaminated nutrition hip disease *may* originate; but we are firmly convinced *that the former is more often the result than the cause of the disease.* The by no means small number of cases that have come under our personal observation, and the special attention we have devoted to this particular point, have satisfied us *that most cases of hip disease were initiated by traumatic injuries.* The effects of the same, however, make their appearance at so remote a period that they are mostly forgotten, and hence have often been ignored. In order to find out the antecedent injuries, we have to recur to the past, and you will rarely fail to establish a positive external cause. In doing so, we shall leave but a small fraction of doubtful cases, which we have no alternative than to connect with contaminated hæmatosis.

The next question arising is, in which structure the disease commences. In reviewing the various structures that constitute the articulation, and in comparing their physiological character with each other, we cannot hesitate to assign to *the investment of the ligamentum teres, the greater susceptibility to inflammation* over the remaining structures. The others have not as much cellular tissue, as many vessels or nerves, which render the nutritive process more active, and therefore much more easily deranged. Moreover, the ligamentum teres is much more exposed to the effects of contusion and contre-coup. Professor Pancoast mentioned but recently a case to us, in which the intense symptoms of pain and rising inflammation after a traumatic injury, could be reduced to nothing else than a strangulation of a fold of that ligament between the head of the femur and the acetabulum. A gentle motion of the limb gave instantaneous relief. The patient had been free of any trouble before the accident, and the question of an inter-articular body would therefore not arise. Our clinical experience has greatly tended to confirm these views. For in all the affected joints which we have had the opportunity of examining, and the number has been considerable, *we have invariably, and with only a single exception, found the ligamentum teres either disintegrated or entirely destroyed,* and this in advance of the disintegration and destruction of the other tissues. In some of our cases of partial exsection of the hip-joint, the contrast between *the entire absence* of the round ligament and the *comparatively but superficial caries of the head* of the femur, was certainly very striking. What renders the inflammation of the investment of the ligamentum teres still more formidable, is the anatomical fact that the vessels for the head of the femur pass through it, and that consequently the supply to the head is impeded by morbid action. That this anatomical condition extends beyond puberty, is exceedingly probable, from the very interesting and highly instructive investigations of Dr. Geo. K. Smith, of this city. For from what other cause than the impeded supply could the shortening of the neck by absorption in fractures be derived? There can be no doubt that such an anatomical arrangement exists, as long as the head of the femur is separated from the neck by a disk of cartilage. Thus it seems to be clear why the disintegration of the ligamentum teres precedes the caries of the head of the femur, and why the caries, or rather necrosis, of the latter is the inevitable consequence of serious affections that befall the investment of the ligament, and why the acetabulum is most exempt from the disease.

These views are by no means novel; they were first advanced by Boyer and adopted by other surgeons, without a sufficient clinical basis however, to be conclusive.*

The next implicated structure in hip disease is the synovial lining of the articulation. There is no reason to exempt it from a primary rheumatic affection, with its pathological consequences; but we surmise it to be a comparatively rarer occurrence than the former. Moreover, rheu-

* Since the delivery of this lecture, (January last,) Mr. Hilton's lecture on the same subject has been issued in the April number of the reprinted London Lancet. We are gratified to find that he has adopted not only the same views, but elaborated them in a most masterly manner. From his careful anatomical dissections of the nervous supply of the hip-joint, and the relations of its filaments to the three principal nervous trunks of the lower extremities, (sciatic, femoral, and obturator nerves,) the symptoms of pain and tonic contraction of certain muscular groups, are thus physiologically explained. In disregarding, however, the nutritive supply of the caput femoris through the investment of the ligamentum teres, he has lost sight of the early consecutive necrosis of that bone.

matic affections of the synovial membrane terminate most usually in ephemeral and harmless effusion, (hydrarthrosis,) being the very rarest affection to which the hip-joint is subject. We have seen but one well-established case.

The inflammation of the cancellated structure is, according to our clinical experience, an equally rare disease, especially in its acute form.* The so-called interstitial absorption or osteoporosis, as the result of chronic ostitis, occurs chiefly in old age, hardly gives rise to muscular deformity, and therefore does not interest us.

Least of all is the cartilage subject to primary disease. All these structures are, of course, gradually drawn into the process of destruction, and thus the disease becomes a general one of the entire articulation, known by the name of coxarthrocace, coxalgia, arthritis, etc. *The disease may also be forced upon the joint from without by periostitis*, as we have repeatedly observed it, and, in fine, may be superinduced by the perforation of the capsular ligament by an abscess. In this respect, *hip disease may be superadded to Pott's disease* of the spine, of which we have seen and described a most exquisite case occurring in a boy.

The peculiar deformity characterizing the second stage of the disease, namely, apparent elongation, eversion, and abduction, arises chiefly from the presence of effused liquid of some kind within the joint, consequently from hydraulic pressure. This opinion is based on experiments and clinical facts, and admits, therefore, of no contradiction. Already at this stage, those reflex symptoms manifest themselves to which we have adverted in our introductory lecture, to wit: attenuation of the extremity, peripheral and nocturnal pains, culminating in tonic contraction of certain muscles, and deformities. We recollect very well the sneers with which in certain quarters our "reflex contractions" were received as the most consummate absurdity. To-day our "absurd hypothesis" has been admitted to be well founded; has been substantially approved of, and is now acted on with all sorts of splints and extension apparatus. We still smart under the concentrated abuse of the "*ludicrous innovation*," while others turn it into substantial advantages. They are welcome to the latter; but *the honor of having first elicited the true nature of those contractions, and of having established the first rational principles in treating them*, belongs to us, gentlemen, and we shall assert and maintain it.

The late and exhaustive anatomical investigations of Schwan into the nervous supply of joints and their pertaining muscles, have most opportunely furnished an anatomical key to the entire complex of reflex symptoms manifest in joint diseases. The clinical facts elicited by us at a far earlier period have now acquired *a positive anatomical foundation*.* We learn, thus, from Schwan, that the obturatory nerve supplies conjointly the inner circumference of the hip-joint, the investment of the ligamentum teres, and the inner circumference of the knee-joint with sensitive filaments, and the entire group of adductor muscles of the thigh with motor fibres. This nervous supply enlightens us at once about that hitherto mysterious causation of the peripheral pain at the inner side of the knee, and the tonic contractions of the adductor muscles in affections of the hip-joint, and corroborates with anatomical accuracy the correctness of our pathological views as to the investment of the ligamentum teres being the structure primarily implicated in the disease.

Powerful as these reflex contractions obviously are in the second stage of morbus coxarius, they are still more powerfully resisted by the hydraulic pressure in the joint; and for this reason the pain is more intense at this juncture than in the third stage, and the deformity is not entirely governed by the contracted muscles. But in the same proportion as the effusion in the joint increases, as the capsular apparatus becomes more distended and attenuated, the hydraulic resistance diminishes. At last the constant traction of the adductor muscles supervenes, the capsule bursts, and the extremity yields to the muscular traction, becoming adducted, slightly flexed, and inverted. The position of the limb is consequently reversed in the third stage, and the pelvis has to be tilted up, in order to procure the parallelism of both extremities. As to the details of the accompanying symptoms and changes in the mechanical condition of the patient, we must refer you to our

* In former times we were the warm exponent of Rust's views, whose inestimable surgical instruction we had the privilege of enjoying, but subsequent investigations have led us to recognize the error, that the cancellated structure is the primary seat of the disease.

* The admirable and highly instructive lectures of Mr. Hilton, delivered at the Royal College of Surgeons of England, now in process of publication in the reprint of the London Lancet, by James Herald, of New York, have, unfortunately, reached us too late in order to be made use of in our lectures. As far as we have been able to perpse them, they are in every respect confirmatory of our views, but much more elaborate and practical. Some of his remarks we shall append whenever we deem them illustrative and desirable.

lectures on hip disease itself. The elongation of the extremity in the second, and the shortening in the third stage, are consequently but apparent, and not real. If, however, the disease proceeds to the destruction of the head of the femur, or if, *by accident*, dislocation of the same upon the dorsum of the ilium is superadded, then, of course, the extremity becomes permanently shortened. The so-called spontaneous dislocation of the femur is now-a-days *an exploded notion*, deserving scarcely our further attention.

It has already been remarked that the adductor muscles are most usually shortened; the extremity is consequently drawn toward, and sometimes across its fellow. In order to render them parallel, the patient has no alternative but to elevate the pelvis on the affected side; and in order to re-establish the centre of gravity, he has to throw the pelvis in sigmoid form, which, however, disappears on placing the pelvis rectangularly upon a firm basis, as is done in sitting down.

In more advanced hip disease, other muscles may become contracted. This difference depends on the implication of other nervous provinces. Thus, for instance, a branch of the femoral nerve supplies the anterior portion of the articular apparatus, and likewise some of the flexors of the thigh. The posterior portion receives its nervous endowment from the sciatic nerve, and conjointly with the flexor muscles. Hence the diffusion of the disease over the joint brings into play a reflexion on other muscles. Besides the adductors, we find some of the flexors, the tensor fasciæ latæ, the rectus and sartorius shortened, when the extremity is drawn up, and may even be forced against the abdomen with a corresponding inclination of the pelvis.

The various plaster casts and diagrams which we place before you, will illustrate the various deformities appertaining to hip disease. In this (Fig. 36) we observe the second stage of hip disease. The limb is greatly everted and abducted, but, at the same time, strongly flexed upon the pelvis, which we do not often see at this period. The cast was taken on account of the rarity of the deformity, and belongs to a little girl, not more than three years and a half old. The next cast is derived from a boy, six years of age. Both his hip-joints were diseased. Unfortunately, the form has been somewhat damaged, and hence you cannot clearly discern the position of the feet. But you notice (Fig. 37) that the right extremity is strongly adducted, and placed over its fellow, being, at the same time, inverted; the joint was ruptured, and we recognize, therefore,

Fig. 36.

Fig. 37.

the third stage, whereas the other extremity is abducted and everted. This joint contained a great deal of fluid, which was withdrawn after the cast had been taken. In the last three (Figs. 38, 39, 40) you observe representations belonging to the third stage. The respective cases have happened in the practice of our friend, Prof. Lewis A. Sayre, who has kindly consented to the use of them for illustration on this occasion.

Fig. 38.

The first represents a little girl, about nine years old. She suffered from the third stage of hip disease, had a large abscess about the joint

with which it communicated. The last two have been taken from a man, somewhat advanced in

Fig. 39. Fig. 40.

years. The disease had terminated in anchylosis of the joint, and the deformity was very great. We are happy to state that both cases were successfully treated by that intrepid surgeon.

*To be continued.*

## COMMUNICATIONS.

### Researches and Observations on Pelvic Hæmatocele.

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(*Continued from page* 110.)

*Diagnosis.*—That the diagnosis of pelvic hæmatocele must be in many cases extremely difficult, it is only necessary to refer to the unfortunate case reported by M. Malgaigne in 1850, where that gentleman proceeded to enucleate what he, and no doubt some of his colleagues, pronounced "a fibrous tumor of the posterior wall of the uterus." After making some free incisions, he discovered his mistake, but too late, for the patient died. And referring to this part of the subject, Nélaton says: "The first case which I saw, I pronounced encephaloid disease, and incurable;" and of the second he adds: "I reflected a long time, and concluded at last to introduce a trocar: if *cancer*, it could do no harm, and, moreover, I had an idea that it might prove to be abscess."

If, however, a careful inquiry be made into the previous history of the case, I cannot perceive how it is possible to make such grave mistakes; because malignant growths, at least, and hæmatocele present so few symptoms in common that, unless in a very anomalous case of the latter, which might possibly exhibit some extraordinary features and complications, such an error of judgment would seem to argue great remissness on the part of the professional attendant.

The *principal* diseases with which it might be confounded are, *pelvic abscess, retroversion of the uterus, dislocated ovarian cysts or fibrous tumors, and extra-uterine fœtation.* With regard to PURULENT COLLECTIONS, it might with propriety be hinted that the constitutional disturbance attending this process is generally so much greater that this one fact alone might be sufficient to settle the question, and in most cases it undoubtedly would be; but in the one which I have related, such a distinction would avail but little, since there were local as well as constitutional evidences in abundance to denote any amount of such trouble. The distinctive sign, therefore, to be most relied upon in all cases of suspected abscess is, the almost *instantaneous formation of the tumor* in hæmatocele; because, whether it be within the peritoneal cul-de-sac or under it, and in the former, even before the inflammatory process has completed the upper boundary of the cyst, a vaginal examination will generally detect the swelling.

*Retroversion*, at first sight, might be mistaken for hæmatocele, or vice versa; but the position, or rather direction of the os and cervix, and other features diagnostic of this displacement render it hardly possible to entertain doubts on this point after mature reflection. Should some peculiarities be present, however, tending to excite suspicions one way or other, the introduction of Simpson's sound will be the most unequivocal means of arriving at a correct inference.*

*Ovarian cysts* are less likely to be mistaken for hæmatocele than fibrous tumors; because,

* Voisin relates a case translated from Mikschik's "Studies on the Pathology of the Ovaries," in which a hæmatocele was mistaken for "retroversion of a gravid uterus at 5m."—though the tumor was perfectly immovable, and a catheter had been introduced into the cavity of the uterus.

though their sudden displacement into the retro-uterine region might give rise to symptoms very analogous, yet in the former the swelling will be more isolated and to a certain extent easily defined, movable, and situated pretty high up in the vagina; the uterus will also admit of being moved independently of the tumor, especially if the sound be used; and, lastly, there will be no sudden anæmia.

*Fibrous tumors*, in the posterior uterine wall, being intimately connected with this organ, might, if examined without reference to the previous history of the case, be mistaken for hæmatocele; but with ordinary diligence in our investigation, such an error would seldom if ever occur.

*Extra-uterine pregnancy*, in some of its characters, might, I imagine, resemble retro-uterine hæmatocele; but the mildness of the symptoms, some of them, perhaps, being those referable to ordinary pregnancy, the slowness of their development, and the detached and movable nature of the tumor, ought to distinguish it from an *encysted* hæmatocele at least.

As to the rupture of the fœtal envelope, and discharge of its contents into the retro-uterine cul-de-sac, I will not undertake to say in what respect it would be likely to differ from intra-peritoneal extravasation; because I cannot conceive how it would be possible to separate the symptoms of the one from the other, with any degree of certainty, in almost any given case.

Lest it might be supposed, from the brief—not to say incomplete—manner in which I have referred to the various diseases and conditions of the pelvic viscera with which hæmatocele might be confounded, that I do not sufficiently appreciate the many and great difficulties attending the diagnosis of this affection, I cannot dismiss the subject without recording my firm conviction that in very many cases an accurate idea of the nature of these tumors will be next to impossible until the trocar shall have penetrated their walls; and should any one feel so self-sufficient as to believe otherwise, I would refer him to the pages of Voisin, where he will find it recorded of Nélaton that even so late as 1857 that justly celebrated surgeon mistook a case of post-uterine abscess for hæmatocele; of MM. Robert and Huguier, who pronounced a case of extra-uterine pregnancy a hæmatocele; of Dupuis, who relates an instance of serous cyst having been taken for hæmatocele; and of Prof. Stoltz, whose error in diagnosis was similar to that of M. Malgaigne.

*The treatment*, it strikes me, should be threefold—*preventive, palliative, and curative;* and when we reflect upon the pathological lesions and functional disorders most likely to predispose to these accidents, the means best calculated to remove such causes demand our first and most serious attention. The following case, being peculiarly apropos to this point, cannot fail to demonstrate still more forcibly the necessity of adopting timely prophylactic treatment:—

*Case* IV.—The lady referred to in Case No. 1 consulted me on the 17th of last December, on account of a pain in the right ovarian region, which she said had been troubling her for about six weeks. At first it was not very severe nor continuous, but for over a week it had been getting very much worse; the slightest exertion increased it, and ascending stairs or suddenly getting into the erect position, was attended with additional suffering, the pain being, she said, precisely similar, both in location and character, to that which preceded the formation of the tumor some years ago.

The catamenia appeared, the last time, about two weeks since, and continued for six days excessive, but previous to which there was no irregularity. The bowels are disposed to be constipated, and when so, she says, defecation causes her great pain, as if something were passing a tender spot in her inside. There is much tenderness over the right iliac and inguinal regions, but no tumor nor enlarged ovary can be recognized; has no pain nor difficulty in micturition, but has remarked of late a good deal of red sediment in the urine, and is sure she passes much less than in ordinary health; tongue clean, and pulse 84. No vaginal examination. The treatment consisted in absolute rest, attention to the state of the bowels, and twelve leeches over the affected part, repeated twice, at intervals of six or seven days. This patient is now perfectly well.

Therefore, instead of being influenced by such bold assertions as those of Dr. H. Bennett, our course should be shaped in accordance with the more rational views of Dr. Ashwell, when he says: "Dull and heavy pains in the region of the ovary, lasting for months, are the consequence of chronic inflammation of the ovaries. I mention the circumstance because they are too often regarded as neuralgic, and treated accordingly; painful menstruation and sterility being their results." The primary lesions of these organs demand our first and most earnest attention.

To do more than make this suggestion would be superfluous, as every intelligent physician is sufficiently capable, without my advice, to adopt the most suitable means of relief.

*Palliative treatment* would consist in restoring the equilibrium of the circulation, combating the peritoneal complications by local depletion, and other antiphlogistic measures, relieving pain by anodynes, and supporting the patient by proper nourishment.

*Curative treatment.*—Much diversity of opinion seems to exist regarding the propriety of opening these tumors. At first, Professor Nélaton and others resorted to surgical interference almost indiscriminately; but many of the cases so treated terminated fatally—some by purulent infiltration, and others by hemorrhage from the wound. In consequence of such results, he (Nélaton) inclines to the opinion that most of these tumors, if left to nature, will disappear by absorption; and recommends, "if opened at all, a free incision, to prevent decomposition;" though, a little further on, he somewhat inconsistently adds: "you can always rely on absorption."

It will be found hard, I imagine, to reconcile such an opinion with the impressions likely to be derived from a perusal of recorded cases; nor does it seem to me safe or possible to base any satisfactory speculation on such limited data as the statistics of hæmatocele yet afford; because I feel convinced that, in several instances where "puncture of the tumor was followed by fatal consequences," the unwarrantable delay in resorting to this means of relief, and not the operation itself, was, in a great measure, the cause of such a result. Again, among the cases treated successfully on the expectant plan, we find many ending by "spontaneous evacuation of the cyst" as well as by absorption; though by right, those which terminate in the latter manner only should be included in such list. I cannot, therefore, understand why, because a cyst *may, in time,* burst, and discharge its contents through the vagina or rectum, or the tumor be removed by absorption, the medical attendant should feel justified in delaying the necessary operation, and thereby causing the patient so much suffering and risk.

Moreover, if fatal consequences have occasionally followed the opening of the cyst, it should not be forgotten that the manner in which this was resorted to, or the questionable proceeding of injecting the cavity afterward, may have had something to do with the issue. Besides, when we know that "surgical interference," too long delayed, may be worse than useless, and that the cyst may even empty its contents through the softened tissues into the peritoneum,* I would submit that we have no right thus to test the patient's powers of endurance; and I venture to predict that further experience, if not the dictates of conscience and humanity, will lead us to discard such practice. For these reasons, the conclusion of Dr. West, though non-committal, seems to me a wise and conservative one, when he says, "that neither plan can be regarded as absolutely the best; but that the special circumstances in each case must guide us."

After the inflammatory complications which follow the invasion of hæmatocele have passed over, and especially if the condition of the patient or the size and location of the tumor be such as would lead us to hope for absorption, such constitutional and topical means as seem best calculated to promote that process should always (in my opinion) be first resorted to. For this purpose, counter-irritation over the seat of the tumor; the internal and local use of iodine, mercury, and other alteratives; perfect rest in the horizontal position; and strict attention to the state of the bowels, would appear to be the principal means likely to advance this end.

*Puncture.*—Recamier, a strong advocate for opening the cyst, when such proceeding seemed at all practicable, was accustomed, after making an incision, to introduce one or two fingers into the wound, for the purpose of removing any clots which might be found adhering to its walls; and Professor Simpson has practiced and recommended a similar proceeding, while French surgeons generally resort to puncture with a trocar, and almost all writers, thus far, practice or commend the use of tepid water, or medicated injections into the cavity, "for the purpose of preventing decomposition" or "purulent infiltration."

Without entering at length into the merits of either method, I would merely remark that, after careful reflection, I decided to use the trocar in the only instance in which I have operated, and should always prefer the same instrument under similar circumstances. In the case referred to, it will also have been noticed that the *rectum*, and not the vagina, was chosen as the more suitable place to puncture, because—first, the posterior

* The cases collected by M. Voisin offer more than one melancholy example of this unjustifiable delay in resorting to the only rational means of relief, namely, *puncture.*

wall was thinner and more dependent; second, there seemed to be less danger of wounding branches of the hemorrhoidal or other arteries—no pulsations having been noticed on this surface of the tumor; third, the discharge, if long continued, would be less disagreeable to the patient; and fourth, when spontaneous evacuation of the cyst takes place, it occurs more frequently, and with no less favorable results in this locality than in the vagina. Similar motives, I imagine, ought to influence our judgment in almost all cases of retro-uterine hæmatocele; and, therefore, I would suggest that the *rectum* would be found the more convenient and safe passage through which to penetrate these tumors.

Whether the canula should be removed or left in the wound for some time, as has been generally recommended, is a question which can only be determined "by the special circumstances in each case." I would merely observe, however, that if a proper instrument be employed—by which I mean a trocar, *such as is used for tapping ovarian cysts*—and especially when the parietes of the sac are attenuated, the canula, always a source of much discomfort to the patient, will be found entirely unnecessary, and ought to be removed. If, on the other hand, on account of the place selected for puncture, or owing to a thickened and infiltrated condition of the parts, there might be any obstruction to the free escape of fluid, or a doubt as to the wound remaining open, the tube, by being left in the cavity, will greatly facilitate the discharge, and obviate the necessity for a second operation.

*Injecting these cavities* having been, I might say, universally recommended and practiced up to the present time, to question such a proceeding might seem almost an unwarrantable presumption; but I must say, nevertheless, that a perusal of the records of many cases so treated has failed to convince me either of its utility or safety. That cases may occasionally occur where such treatment might be deemed advisable, I can readily imagine; but it should not be forgotten that the lining membrane of an ovarian cyst and the more or less inflamed walls of a hæmatocele are very dissimilar in their nature.

A full consideration of the many important and interesting points bearing upon this part of the subject might be made to occupy many pages; but as my remarks have already extended far beyond the intended limits of this paper, and as further experience may enable me to discuss more at length many significant questions connected with the pathology of pelvic hæmatocele—as for instance, the changes which take place in the extravasated blood, and its action on the surrounding tissue—what has been said may be deemed sufficient for the present.

In the case related by Professor Bedford, though a comparatively mild one, the tumor was penetrated no less than five times, and the patient ultimately recovered. And if I have correctly appreciated the great danger of waiting in these cases until secondary inflammation, or the patient's feeble and worn-out condition warns us that immediate relief or death must soon follow, *I am fully satisfied that, in a retro-uterine hæmatocele of any considerable magnitude, it would be safer to penetrate the tumor twenty times than to "always rely on absorption."*

In conclusion, let me be permitted to say that I am fully conscious of the many omissions, and perhaps inaccuracies, noticeable in the preceding remarks; but, in extenuation of such defects, I would observe that my aim has been, not to attempt an elaborate dissertation on pelvic hæmatocele, but to glean from the rich field of pathological research some established principles which seemed to me to have a bearing on certain important points, and having compared them with facts and authentic statements, to present to the Academy, in a tangible form, the result of my experience and investigation.

If, thus, I should be instrumental in directing the attention of some more able observer toward a thorough consideration of the subject, my end shall be accomplished, and I shall rest satisfied in knowing that my effort, however feeble, has not been without its reward.

A tolerably comprehensive investigation into the history, nature, and alleged causes of this affection, tend to convince me: *First.* That bloody tumors within the female pelvis are not met with *frequently*, and should not be confounded with pelvic cellulitis, or its consequences. *Second.* That the relative location of the tumor is not an infallible guide in determining as to its intra or sub-peritoneal character. *Third.* That certain pathological principles and physiological phenomena inseparable from such inquiries make it at least very probable that the *causes* which predispose to the two forms of hæmatocele are not only entirely distinct, but differ from each other as widely as pleurisy and pneumonia.

*Fourth.* When inflammatory action precedes these hemorrhages, the character and seat of said inflammation determine the location of the effused mass.

I propose to submit the following brief remarks as corroborative of these opinions.

A few years ago, during my service to a public institution, a married woman, aged forty, and of cachectic appearance, applied for advice at the hospital clinic, on account of "cancer in her womb," which *suddenly* manifested itself about three months previously.

She said her courses had always been regular, but that for some months previous to the appearance of her present trouble, she had suffered a good deal of pain and soreness in both groins—particularly the left—and which were always more severe immediately previous to the appearance of the catamenia. Her husband being dissipated, she at first suspected that he had communicated some "disease" to her, as coitus had been very painful. Her bowels never moved without the action of medicine, and defecation, at all times, was attended by the greatest distress. She said she had consulted several physicians, but they all pronounced her disease incurable.

A vaginal examination disclosed a tumor in the post-uterine space about the size of a large orange, but very irregular in shape, hard, and extremely sensitive to pressure. The uterus was pressed upward and toward the pubes, but was slightly movable. The case was pronounced one of malignant disease, and anodynes were ordered.

A few months afterward I saw the patient in the street, to all appearances in the enjoyment of good health, and not long since I caught a glimpse of her again, a hearty, rugged looking subject. I did not stop to ask after her "cancer," being unwilling to afford her an opportunity of expressing her opinion on the subject of medical diagnosis, and my own abilities in that line particularly.

Instances of this kind might, no doubt, be related by others, if they felt so disposed, but I cannot believe they are, by any means, numerous. That cases of a less equivocal nature have occurred from time to time, and though sufficiently understood, have been allowed to go unrecorded, is also very possible; but I suspect their number would be found much smaller than those to be classed with the example I have related; for it is hardly possible that any member of our profession, who takes the slightest interest in the progress of medical science, should have met with cases of so important a disease as pelvic hæmatocele, and contented himself by selfishly appropriating the results of his experience.

At a recent meeting of the Medico-Chirurgical Society of Brooklyn, in the course of a discussion on hæmatocele, Dr. Bauer described a case, which he had met with in London, in 1852, and which illustrates clearly how little was known of this affection at that period. Without relating the particulars of this case, it may be enough to state that the combined experience of Professor Murphy, Dr. Robert Lee, and Mr. Isaac Baker Brown, did not enable these gentlemen to understand the character, *or account for the disappearance by absorption* of a tumor of this nature.* Moreover, Professor Murphy declared to Dr. Tilt,† in the following year, that "he had never seen a case, nor had Dr. Oldham;" and even Nélaton himself saw but six cases during five years after his efforts were directed toward its special investigation.

That Professor Simpson has been, to some extent, familiar with hæmatocele ("pelvic hæmatoma") for several years, may be inferred from his remarks,‡ though but one case has been fully reported, and two or three others referred to in his lecture on the subject. Dr. West says he has been able to meet with no more than four, and even of one of these he seems to have some doubt as to its true nature. Scanzoni, too, has been unfortunate in failing to observe more than one or two cases; and, to come nearer home, a distinguished physician of New York,§ whose opportunities and powers of observation cannot be questioned, and who has taught and practiced midwifery for a quarter of a century, has met with but one case. Finally, Voisin, who has evidently devoted more attention to the literature of the subject than any other writer, says "*retro-uterine hæmatocele is by no means a frequent disease, because hardly fifty cases from all sources can yet be collected.*" Touching *the danger attending these bloody tumors*, the views of

* The particulars of this interesting case may be seen in the published Transactions of the Brooklyn Med.-Chir. Society.

† During a discussion on Dr. Tilt's paper on "Sanguineous Pelvic Cysts," read before the Medical Society of London, Dec. 18, 1853, Mr. I. Baker Brown having insinuated in his remarks that he had frequently (?) met with cases of the kind, Dr. T. said, "he considered it a singular circumstance that Mr. Brown should have frequently met with cases of sanguineous pelvic cysts, when he had been informed by Dr. Murphy and Dr. Oldham that in their extensive fields of inquiry they had not met with them."

‡ Clinical Lectures on Diseases of Women—Subject, Hæmatoma.

§ Professor Gunning S. Bedford.

Professor Simpson, sustained as they are by the recorded experience of most observers, ought to be sufficiently decisive; for that author says: "*This affection, though still less known than pelvic cellulitis, is well worthy of most careful study, for this reason if for no other, that it is relatively more fatal than pelvic cellular inflammation.*" He thus not only testifies as to the great hazard which attends it, but does not even hint that there is any analogy between the two diseases. Indeed, were it not (as seems to me very probable) that intra-pelvian tumefactions, the result of inflammatory exudation merely, by which the tissues become infiltrated and œdematous, have been occasionally described as hæmatocele,* it would not, perhaps, be necessary to insinuate that there is but little, if any, pathological similarity between the two.

It is true the swelling may, in both cases, be preceded and accompanied by constitutional disturbance indicating a high degree of inflammatory action; and it may also be probable that the starting-point in many cases of pelvic cellulitis might be a clot of extravasated blood giving rise to wide-spread inflammation in tissues already, for various reasons, predisposed to such action. Moreover, during the process of suppuration in these parts, I can see no reason why venous tunics, already attenuated, should, *in all cases*, be exempt from ulcerative destruction;† yet we would hardly be justified in associating etiologically two affections presenting so few features in common, nor am I aware that any writer has attempted it.

Though much diversity of opinion has hitherto existed regarding *the relative frequency of the intra and sub-peritoneal varieties of hæmatocele*, all seem to admit that the hemorrhage may take place in both locations. Indeed, even M. Voisin, who has written so able and interesting a treatise ostensibly on one form of the disease only, presents, among the thirty-six cases which he has been able to collect, many examples of what cannot be viewed in any other light than plain illustrations of that very form which he (unwarrantably, I think) refuses to recognize.

It is much to be regretted that the value of this author's researches should have been diminished by the prominent introduction of a very popular casual theory; because as long as "*disordered menstruation*" continues to be, as it is, almost universally acknowledged as *the* cause of this complaint, just so long, I contend, will we remain in doubt as to its true pathology.

If in a case of pulmonary hemorrhage, the subject of which presented all the external as well as auscultatory evidences of phthisis, or in that of rust-colored expectoration consequent upon an attack of pneumonia, we should attempt to explain these symptoms by gravely asserting that they were the result of disordered bronchial secretion, what light would thus be thrown upon the true nature of either condition? And yet "disordered menstruation" and the affection under consideration can hardly be said to bear any closer relation as cause and effect.

The fact that such names as those of Nélaton, Bernutz, Malgaigne, and Denonvilliers head the list of those who promulgate these peculiar views, might be deemed *prima facie* evidence of their worth; nevertheless, it is well known that great men have sometimes indorsed groundless theories, and it might possibly be even so in this instance.

One of the arguments adduced by those who question the existence of large hæmatomas within the cellular tissue, and founded no doubt upon ideas such as that promulgated by M. Lefort,* is, that if not impossible it is at least very improbable that the peritoneum could be so raised up from the uterus as to form the upper boundary of the cyst. It is true, though the post-uterine cellular tissue near the cervix and upward to the extent of an inch, and sometimes more, is loose and abundant, it gradually becomes less so from this point, more dense, and, toward the fundus, semi-fibrous. It must also be admitted, and I have satisfied myself as to the fact, that in this latter situation the serous tunic cannot be separated *with any degree of facility* from the uterine stroma, unless the parts have first been subjected to maceration.

However, those who initiate their arguments from a mere anatomical point of view, and without making due allowance for the relative as well as the structural changes which diseased action may produce in these and other parts, ought to bear in mind that it is very probable these tissues often undergo as complete maceration when subjected to certain pathological influences in the living body—as, for instance, in pelvic cellulitis,

* See Dr. Bell's Case in vol. xxxvii. Lon. Med. Gaz.

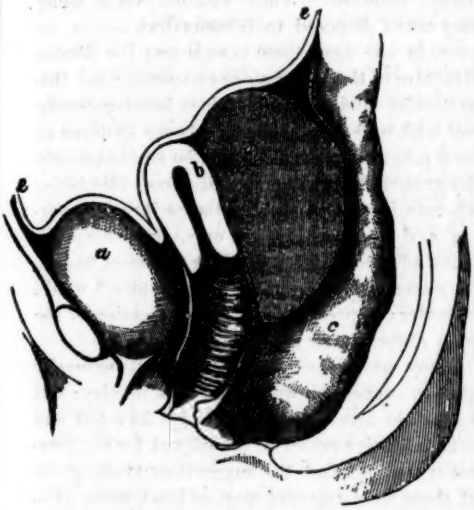
† The author is not unaware of the opinions of many pathologists, particularly Rokitansky and Virchow, regarding the formation of a clot opposite to the point of ulceration *from without*, in the coats of veins.

* Voisin, page 215—referred to at page 7.

or that condition which Pirogoff would term acute purulent œdema—as they do when removed from the dead subject and submitted to the action of fluids with this special aim.

Indeed, Professor Simpson, who treats this whole subject in his usual lucid and eminently practical style, has conclusively settled this question by the following facts:—

A patient "was sent from a great distance to Edinburgh, in consequence of a pelvic tumor having suddenly appeared. Fatal inflammation was set up by the journey. On dissection I found the reflection of the peritoneum between the uterus and rectum raised up, as shown in this diagram, and a large mass of broken coagula of




*a*, bladder; *b*, uterus; *c*, rectum; *d*, tumor; *e e*, peritoneum.

blood formed the tumor, having been extravasated behind the peritoneum, forming the posterior covering of the broad ligament, and, as it accumulated, having separated and pushed before it that portion of peritoneum and utero-rectal fold of this membrane."

Those who will take the trouble to carefully analyze the record of cases thus far available, cannot fail to be impressed with two very important facts noticeable in both of them, namely: 1st. The absence of symptoms sufficiently indicative of so grave an accident as extensive hemorrhage into the peritoneal sac. 2d. *The lateral position of the tumor* above the brim of the pelvis, and frequently also in the vagina.

These two peculiarities alone, or in fact either one, ought (I imagine) to make any diagnostician, however expert, hesitate in pronouncing such tumors intra-peritoneal; because there is surely nothing in the normal arrangement of the pelvic viscera, nor is there any pathological law regulating the disposition of fibrinous adhesions following acute peritonitis, which would favor so often this lateral isolation of the blood. Besides, is it at all probable that resorption of such large masses of blood, or, indeed, recovery through any means, would result so frequently, if we admit that the serous membrane is often the seat of such violence? Consequently, that *encysted bloody tumors within the peritoneal cul-de-sac are extremely rare*, and that *those occupying the structures external to that membrane constitute the great majority*—say 75 or 80 per cent. of the whole—would seem to be about the correct conclusion to arrive at regarding the relative frequency of intra- and sub-peritoneal hæmatocele.

These opinions thus confidently expressed, and no less positively entertained for some time, have lately induced me to pursue my investigations further, with a view, if possible, of being able to correct certain misconceptions which exist respecting the differential diagnosis of these "*intra-pelvian sanguineous cysts.*"—TILT.

It has been repeatedly asserted by many who might be considered capable of offering an opinion on these points, that in sub-peritoneal hæmatocele the tumor in the vagina will be lateral, and the uterus displaced toward the opposite side; and that a large central swelling would, on the other hand, plainly indicate that it must be intra-peritoneal. But the following *Experiment* which I have made, and repeated over and over again with like results, will demonstrate, pretty conclusively, that *such diagnostic signs are entirely unreliable.*

A small opening was made into the superior fold of the broad ligament on left side, and at a little distance from the inferior border of the ovary, into which was inserted the tube of a syringe, such as is used for anatomical injections; the parts having been carefully secured by ligature, water was now thrown into the cellular tissue, which it entered with facility, separating the two layers of the peritoneum and spreading them out in the form of a tent. At that juncture the water passed with much more ease than elsewhere, under the peritoneal covering of the iliac fossa, raising the same off the muscle, but quickly and with but little force filled up the whole recto-

vaginal septum and opposite (right) side as high up as the brim.

A vaginal examination was now made, when the finger came in contact with a large *central* (*retro-uterine*) *swelling*. The injection being next continued, the left iliac fossa rapidly became very much distended, and that of the opposite side also swollen, but to a more limited extent.

The post uterine connective tissue, as high up as the junction of the cervix with the fundus at least, offered no resistance to the passage of the liquid.

The lessons which this and similar experiments teach are, first, that although a lateral position of the tumor will always denote its sub-peritoneal character, yet, the fact of its being central and occupying the whole posterior part of the vagina does not, by any means, prove the contrary; and, secondly, that the position, size, or shape of the swelling — though, *if intra-peritoneal, always central* both above the brim as well as in the vagina—possesses but little, if any, value as a guide to differential diagnosis.

There are, among others, TWO INTERESTING AND HIGHLY INSTRUCTIVE FACTS observable in connection with the occurrence of hæmatocele: *first*, that of all the subjects in which this peculiar disease has yet been noticed, and whose cases have been properly authenticated, married women, and especially those who have been pregnant or borne children, constitute at least four-fifths; and, *secondly*, that unmarried females, or those whose sexual organs have not been subjected to excitement, or physiological changes other than we know to attend the menstrual function, amount to a fractional portion only of the whole. Without dwelling on the importance of these facts as corroborative of views already set forth, it may not be amiss to notice a few reflections naturally occurring in this connection.

Though, after parturition, the uterine sinuses contract, and vessels imbedded in the dense stroma of that organ are supposed to resume their original size and condition, yet it by no means follows that the utero-ovarian "thin-walled veins *without valves*,"* possessed with little or no contractile power, and surrounded by loose cellular tissue, should undergo a similar change. Indeed, it would seem more probable that *permanent dilatation of these veins*, more or less, *is a necessary consequence of pregnancy;* and if the ovarian vessels, in that condition, bear any analogy to those in the lower extremities, which never resume their original size nor disappear but by obliteration, it is evident we must look here for the only true predisposing cause in all cases of sub-peritoneal hæmatocele, and which, as I before intimated, may safely be put down at 80 per cent. of the whole.

Moreover, though it has been customary with writers to describe the admitted varieties of ovarian inflammation by the terms "acute," and "subacute," or "chronic," it would seem more in accordance with our present knowledge of ovarian pathology, to designate these two *really distinct affections* with reference entirely to the tissues involved. Thus, varicose veins being very much disposed to inflammatory action, we have, in one case, these vessels and the fibrous structure of the gland alone concerned; and this particular condition of the organ being generally met with in females who have borne children or been pregnant, might, I think, be more correctly designated by the term *Ovarian Phlebitis;* whereas, in other instances, the peritoneal covering and vesicular tunics only, or principally, being affected, and confined for the most part to the unmarried and non-puerperal states,* would be better comprehended by the application of the term *Follicular* or *Peripheral Ovaritis.*

Many questions of great interest naturally arise in connection with this line of inquiry; but as further investigation is needed for a full and comprehensive review of the subject, for the present it is hoped that the suggestions growing out of these brief remarks may, at least, serve as a basis for future research.

In the investigation of this and other diseases, physiology and pathology furnish us with a bountiful supply of "raw material," which, if diligently collected and properly applied, may serve to explain many anomalous facts and incongruities, and the writer has aspired to no higher aim on the present occasion.

Any one, therefore, who may have perused this unpretending contribution to our scanty literature on the subject of hæmatocele with the expectation of finding a record of some wonderful discovery, will, doubtless, have been much disappointed, for it is totally devoid of such merit, and no such distinction is claimed.

IN CONCLUSION, I would remark that I have

* Kölliker's Manual of Human Histology, page 257. Syd. ed.

* Rokitansky's Path. Anat., vol. iv., page 364. Sydenham ed.

omitted a full report of many cases which might have been introduced as corroborative of some of the views set forth in the preceding pages, but such has not been deemed essential for the fulfillment of the object which I propose to accomplish in thus promulgating the results of my investigations, and that object has already been declared.*

## Observations on Hernia, and the Application of Trusses.

By D. L. D. SHELDON, M.D.,
Of New York.

It is generally admitted that a very great portion of the inhabitants of the United States are afflicted with some form of hernia, and experience in this kind of practice has confirmed in me the truth of the acknowledgment.

I am convinced that this, like other disease, requires proper and seasonable treatment, which will materially reduce its frequency by permanently curing a large portion, and secure ease and safety for the remainder. Knowing that a great majority of those thus afflicted are treated exclusively by the application of trusses, and that but few of those instruments are competent to fulfill that for which they were originally designed, it is with much interest I concur with propositions for further improvement in their construction. Yet this is not all the change required in the treatment; for cases are generally treated by unqualified hands, which not only *virtually* destroy what *passable* qualities a truss may possess, but places the life of a patient in extreme peril.

Now the question may properly arise: How, and from what source does this inconsistent manner of treatment exist? In reply I will state (although it may be surprising to many) that it evidently originates and is now receiving its support from a majority of regular graduated physicians, far too many of whom, through practical inattention, are unskilled in that particular branch. It is by no means an uncommon occurrence to have physicians admit their ignorance in regard to *hernia* and its treatment; and in a practice of many years they have never even attempted to apply a truss, for the simple reason that *absurd* custom had taught them to transfer all such cases directly to apothecaries, except in a few cities, where there are regular truss dealers; in which case they are transferred to them. With very few exceptions the transfers are made to those who know nothing of the anatomy of hernia, and are therefore incapable of fitting or deciding upon the requisites of a truss; few indeed of such dealers can distinguish *hernia* from hydrocele, varicocele, or bubo; or *femoral* from *inguinal* hernia. This unjustifiable transfer, although so destructive to life and comfort, is so notorious that a majority of persons thus afflicted apply directly to those merchants for relief, either with the idea that no skill is required to fit a truss, or that such dealers are superlatively skillful; were it otherwise, they believe that physicians would never have thus directed them. In my opinion, this arrangement is inequitable and contrary to the principle of our profession. A physician should just as well understand the general principles of treating hernia, and the manner of applying trusses, as that of treating fractures and applying splints, or of treating wounds and applying dressings. Although they are unjustifiable in transferring either to incapable hands, the former would prove the most destructive to life. Had the principle here advocated been strictly pursued, physicians would never have become responsible for so many removals to that "undiscovered country" beyond the grave. The subjects of this common infirmity should never have been taught, even *indirectly*, the erroneous idea that their disease did not require scientific treatment; but that to treat it successfully in all its varied and complicated forms, it is necessary to understand nearly all the different branches of science taught in our medical schools.

The kind of instruments required to be used in the treatment of hernia depends much upon the kind of rupture to be treated. Although numerous trusses are extant, an extremely large proportion of inventors are neither physicians, surgeons, nor anatomists; their trusses, therefore, are not applicable to the purpose. Yet physicians, seldom perceiving their inadequacy, thoughtlessly recommend them.

To me it is not surprising that comparatively so few improvements in trusses and other surgical instruments have been effected, when I consider the vast amount of pressure brought to bear *by the medical profession* against any member who is an inventor of a new or improved surgical instrument, and for the expenses thus incurred, accepts of the constitutional advantages tendered by Congress to authors and inventors for the *purpose* of promoting science and useful

* See conclusion of Paper read before the Academy of Medicine.

arts. (Code of Medical Ethics.) In what manner, or upon what principle such an *absurd*, injudicious, and unnecessary act should be permitted to incumber the wheels of surgical reform, I have not been able to comprehend; and as far as my *direct* knowledge extends, the profession regard it not only as a check upon an intellectual faculty, but destructive to the welfare of humanity.

Having directed my attention for a number of years to the treatment of hernia, and the required capacity of trusses, I have been convinced that the instruments generally used for treating such cases are inadequate and therefore susceptible of great improvement; furthermore, that no truss can fill the requirements without being capable of *varying* its pressure both in *amount* and *kind*. All who have practiced much in this branch of the profession, will doubtless acknowledge this desideratum.

As I am confident that a portion of the medical profession gladly embrace suggestions connected with professional advancement, I venture to offer my views in regard to the required capability and construction of trusses. I will not *now* suggest anything new in regard to the spring and *back* pad of a truss, but merely state that the spring of a single inguinal truss requires to be of sufficient length and shape to extend from the centre of the spinal column around the pelvis, crossing the linea alba, and terminating near and on the *inner* side of the inguinal canal. To this extremity a pad is attached, shaped similar to a three-quarter circle, and capable of being turned under the spring to fit its abrupt edge

Fig. 1.

to the inguinal line. This edge is sufficiently concave to admit a portion of an oval, oblong compress within its concavity, the longitudinal centre of which should be applied directly over the line of the inguinal canal. The compress is attached to the pad in such a manner as to be extended or retracted, depressed or elevated at either or both ends at the same time; this not only capacitates it for precisely fitting an inguinal line, and thus avoids what is very uncommon in a truss, (the infringement of the motion of the thigh upon the body,) but effects the required compression upon the whole or any portion of the inguinal canal, or it merely closes the upper ring. It will be perceived by this plan that the power of the spring is *always* expended upon the pad until it or any portion of it is transferred to a part or whole of the compress, as circumstances may require.

Fig. 2.

The front pad of a femoral truss is somewhat different in shape, but occupies nearly the same position as the inguinal. To it a lever is attached, capable of both a circuitous and sliding motion; at its extremity, which extends beyond the circumference of the pad, a compress is attached, a little smaller, but precisely upon the same principle of the inguinal. By the circuitous motion, the compress can be brought *directly* in line and in contact with the femoral vein, without intruding upon its circulation; the sliding motion will bring it in contact with the crural ring; in this position it is readily retained. The compress for other kinds of ruptures is effected upon exactly the same principle.

# EDITORIAL DEPARTMENT.

## PERISCOPE.

### Weekly Summary of American Medical Journalism.

By O. C. Gibbs, M.D.

#### ON OVARIOTOMY.

*Concluded from page* 124.

*What is the best time to operate?*—Having determined that ovariotomy is justifiable under some circumstances, it is proper to inquire when it should be undertaken. Upon this point surgeons have differed—some arguing that an early operation would give far better results, becoming then nearly as simple as that of spaying an animal. Others have claimed that the risk to life was by far too great to be undertaken when the tumor is no greater than your fist, and the patient has a fair prospect for several years of life. The latter think the operation should only be performed as a last resort, and when the patient can reasonably expect to live only for a few weeks or months at best. The former think it is only cruelty to operate then; for, from disease and suffering, she is just ready to die, and cannot reasonably be expected to survive so terrible an operation as is then requisite. The arguments of the former we regard as unsound: a woman is not a sow or a heifer, and the removal of a tumor from her bowels, though it may be small, is not as little hazardous as the spaying of an animal. And, further, the near approach of death from disease is not always an objection to a severe operation, especially if that operation consists in the removal of the disease that threatens life. A man very near the grave from hectic, etc., consequent upon disease of the knee-joint, for instance, will often bear the removal of his limb above the knee with less constitutional disturbance than would a man in health. We do not quite fancy the arguments of the latter class either, for there is a period in all cases where it is foolish to think of success, to say nothing of the cruelty of the operation. But let us consult statistics upon this point, and the result of experience. The statistics of the Ohio cases show, so says Professor J. W. Hamilton, that, "*as a general fact, the extirpation of the larger ovarian tumors is more successful than that of the smaller, in the proportion of nearly three to one!*" (See *Trans. Ohio State Med. Soc.*, 1859.) That is, early operations are more fatal than those well advanced.

The Kentucky statistics are too imperfect to bear much upon this point; however, where the size of the tumor is mentioned, we find in most of the recoveries it was large.

Bearing upon this point, the remarks of Spencer Wells, who has operated so successfully, are quite decided. To the argument in favor of early operations, he says:—

"Ovariotomy is an exception to the general rule, for the most successful cases are those in which the patient has been *most reduced by the disease, or the peritoneum most altered by extension.* It is remarkable that in all the successful cases I have related, the disease was in a very advanced stage, while in the first fatal case it was in a much earlier period of development, and the general health comparatively little injured." (*Braithwait's Retrospect*, Part 40th, 1860.)

Dr. Clay and I. Baker Brown both believe that the peritoneum, by some means, during the advance of the disease, is so thoroughly altered from its normal character that it is less than usually prone to inflammation. Professor Hamilton says his statistics show that the peritoneum may be injured with a great degree of impunity. With a person in health this is certainly not true. It will be remembered that, of Dr. Brown's five cases, the one that died had but a small tumor removed—in the other four it was large.

Professor Henry Miller is of opinion that the proper stage for the operation is not reached until the symptoms "declare audibly that the patient's days are numbered, and that, without the decisive interposition of chirurgical art, she must be speedily consigned to the tomb."

If it be true that changes are wrought in the peritoneum by the presence of the tumor, that render it less and less sensitive to an injury, and that to remove a large tumor is less dangerous than to remove a small one—and we believe both to be true—then these are very fortunate circumstances. An opportunity is given to put to a thorough test every other and safer means of cure, without jeopardizing the patient's chances in an operation. The patients and friends see for themselves the great and immediately impending danger, and will *seek* an operation rather than require an *urging*. This fact, should the patient die from the operation, will relieve the surgeon from one source of unjust censure. And, further, in case of death, the patient's loss is but small, and the mind of the friends, as well as that

of the surgeon, will be at ease in regard to the propriety of their course.

Another advantage is, an abundance of time is had for making out a correct diagnosis. Tapping can be performed as a means of relief, and postponement of the final day of great risk, and repeated tappings, unless the patient's strength is too much impaired by it, without enhancing the final danger. In fact, Dr. Atlee says "ovariotomy should never be attempted without previously having employed this means of diagnosis," that of tapping.

In a very able paper upon ovarian tumors, by Dr. Jules Worms, and translated from the French by Dr. O. D. Palmer, and published in the 5th volume of the Reporter, (we have not previously drawn from this paper because it was in the hands of all the last year's subscribers to the Reporter,) its author says that before ovariotomy is resorted to,—

"All the means of cure *less dangerous* than extirpation should have been put in requisition in vain, and the health of the patient must be sufficiently compromised so as to induce the belief *that death is certain and near*."

*Should the incision for ovariotomy be a long or short one?*—Having determined the time proper for ovariotomy, it next becomes proper to determine upon the method of incision. Several operators have insisted that a small incision is far less dangerous than a large one, and that the facilities for operating are equally good. Others claim that an incision from sternum to pubis is not more dangerous, and that the facilities for removal of the tumor, ligating the pedicle, overcoming adhesions, etc., are much greater. Some even have claimed that the long incision is even the less dangerous of the two. The short incision cannot always answer, and yet we do not believe the long incision is always as safe as a short or medium one, when the latter will answer. One that will admit the hand, if that becomes necessary, we believe to be the preferable one, and if that does not answer, it can be elongated to meet necessities afterward.

Dr. E. P. Bennett, of Connecticut, in the *American Medical Times* for August 10th, 1861, says:—

"The fatal error, in my opinion, in regard to this operation, consists in surgeons still continuing to make large incisions through the peritoneum, and handling too roughly the abdominal viscera. This is entirely unnecessary." * * * "If there are adhesions, you will find them, and generally they can be broken up with the finger, so that the large openings are entirely unnecessary and extremely hurtful, and, when abandoned, I feel confident that ovariotomy will come to be a successful operation, and the prejudices of the profession against it will cease."

Prof. Cooper, of San Francisco, prefers the long incision. Jules Worms, of Paris, says: "It is now thought that a long incision does not expose the peritoneum any more than a short one." He, however, advises the first incision to be but four or five inches, and then elongated to meet circumstances. We are quite confident that in time surgeons will settle down upon an incision of from three or four inches in a great majority of cases.

The preliminary preparations for an operation we slightly touched upon in the outset of this article, and shall not enlarge upon them here.

*Manner of removing the tumor.*—These tumors are mostly cysts, containing a fluid of greater or less density. To make an incision of sufficient length to remove them entire is quite unnecessary, besides being reprehensible practice. Their contents should be evacuated, and the cyst thus reduced to its smallest possible dimensions. If the tumor is composed of more than one cyst, as is very often the case, the presenting one should be tapped, the cyst drawn through the incision, then the next and succeeding one, if any, served in the same manner. When the tumors or cysts are entirely withdrawn, if it be possible to dress the abdominal incision, with the extremity of the pedicle slightly projecting, two double sutures should be passed through the pedicle near the tumor, so as to take advantage of its full length, about equidistant from each other and the edges. These should be tied so as to include the pedicle in three separate ligatures. By this means a flatness of the pedicle is secured that is not when ligated with one, and it consequently is better fitted and fastened in the incision. The tumor may now be removed by means of the écraseur or the knife. The ends of the ligatures should be left uncut until the application of sutures, that the surgeon may have full command of the pedicle.

In the evacuation of the contents of the cysts a canula is usually used. To this an elastic tube should be attached, so that the fluid can be conveyed away to a vessel for its reception, without wetting the patient or flowing over the bowels. Dr. B. Romer, of Virginia, uses a grooved piece of pine, so shaped at its upper extremity as to

fit the convexity of the tumor, to convey the fluid away. A bit of lint covers the end that is pressed against the tumor. Better, and probably best of all, is the peculiar trocar and canula, first used by Dr. Charles Thompson, of England, and warmly advocated by Dr. Spencer Wells.

We deem it of the first importance that neither blood nor the fluid contents of the cyst or cysts should be allowed, in any quantity, to find their way into the peritoneal cavity. Their presence, if left, will prove a source of inflammation, and their removal by means of sponges is by no means a harmless procedure. This caution has not been sufficiently attended to, and, doubtless, many lives have been lost from the neglect.

*Is the admission of air into the peritoneum injurious?*—This question is, doubtless, very difficult to settle, and if settled, we are not sure that the exclusion of air can well be secured. Dr. I. Baker Brown thinks the exclusion of air is quite important, and says: "This should be done by two assistants carefully covering the wound with warm, wet flannels, so as to prevent both the extrusion of the intestines and the admission of the air." Dr. Spencer Wells says: "In ovariotomy the entrance of air into the sac is of no importance." Most recent writers that we have seen make no reference to the matter. Prof. W. H. Byford, in his reported successful case, says that the free entrance of air was unavoidable. It is, in our judgment, of but little consequence whether air enters or not. We are not so much afraid of air as of water.

Once, in a case of a very severe burn that was progressing admirably, and beyond all expectation, in which we had positively forbidden any cleansing with *water*, though suppuration was very free, our directions were disregarded—a very severe inflammation of the granulating surface was the result. Any fluid from the sac, or any necessity for cleansing with wet sponges, are of far more consequence than air.

*Should considerable adhesions prevent the completion of the operation?*—Many operations have been commenced and not completed to the no small chagrin of the operator, but the greater disappointment of the patient. Various causes have determined the abandonment; but prominent among them have been adhesions, which the operators have supposed to be insuperable objections to the completion of the operation. Their breaking up, it has been supposed, would cause severe peritoneal inflammation. Dr. I. Baker Brown believes, and in this, he says, he is borne out by the great experience of Dr. Clay, that adhesions form no objections to the completion of the operation. Yet he has been "led to the conclusion that all adhesions should be torn through and never cut." Dr. Spencer Wells is of the same opinion that a certain amount of adhesions are no objection to the completion of the operation. He also says: "In breaking down adhesions it is far safer to use the hand than the knife." In case of adhesions to the stomach, liver, etc. difficult to overcome, he would advise that the tumor be dissected away in such a manner as to leave only the *outer coating* of the sac attached to the adherent surfaces. Such adhesions, however, are quite rare.

Jules Worms concludes his remarks upon this point by saying: "All that we have learned from facts is summed up in this: the even violent separation of very extensive and very solid adhesions does not always exclude the chance of success." But he further says: "There are cases in which it is impossible to separate the tumor from the parietes, and we are then obliged to suspend the operation." It is quite probable that adhesions have been looked upon with too much dread. Altered as the peritoneum is in character and sensibility, it seems that adhesions can be broken up without materially complicating the case or greatly increasing the risk. It is to be hoped that in future fewer cases will be abandoned uncompleted after making the abdominal incision. It seems the risk to life is nearly as great from the incision as from the completion of the operation. When the patient makes up her mind to submit to an operation, she does so in hope. When the operation is commenced and abandoned uncompleted, disappointment and despair take possession of her mind, and, really, her condition is pitiable.

*The manner of fixing the pedicle.*—In the commencement of this article, we made a few remarks upon this point that were expressive of our opinions. We believe that, in a large majority of cases, the pedicle can be so fixed that its cut surface can be daily examined, and that any hemorrhage or purulent discharge therefrom will be external to the body, instead of within the peritoneum.

Dr. I. Baker Brown is particularly partial to the clamp, as suggested by Dr. Hutchinson. It is, doubtless, a very good instrument, but we believe it has been the means of many deaths. We

have carefully examined all the cases of death that have come under our observation where the clamp was used, and we find several cases where the death was of such a character as to suggest slipping and hemorrhage. The following from Jules Worms is to the point. He had removed the tumor, applied the clamps, and the patient was comfortable:—

"Four hours after the operation the patient was sinking; blood spouted from the wound. Supposing there was a hemorrhage from the surface of the excised pedicle, a new ligature was placed around it. Death seemed imminent, but did not take place till noon of the next day—twenty-four hours after the operation. The autopsy revealed a large quantity of free blood in the abdomen. *This proceeded from a portion of the pedicle, which, escaping from the grasp of the instrument, had slid into the abdomen.*"

Spencer Wells alludes to this same matter. In some of his cases where the clamp was used, he found it necessary to apply a ligature afterward, "as in each case a portion of the pedicle slipped from the grasp of the clamp." We have seen no plan of fixing the pedicle that pleased us so well as that adopted by Prof. W. H. Byford, of Chicago, in a successful case reported by him, in the *Chicago Medical Examiner* for August, 1860. He says:—

"Two of the silver pins used in transfixing the lips of the wound *also passed through the stump of the detached tumor, and held its amputated margin a little above the level of the skin of the abdomen.*"

We do most decidedly prefer this method of fixing the pedicle to any other method we have seen suggested, the clamps not excepted.

The importance of dressing the pedicle in the incision so as to present its cut surface exterior to the body, has been previously remarked upon. We should be happy to quote some recent opinions upon the importance of this measure, but our limited space—which we have already exceeded—forbids. Henry Miller, M.D., reports a successful case of ovariotomy, in the *North American Medico-Chirurgical Review* for January, 1861. He dressed the pedicle in the wound as above suggested, and remarks, after watching the case:—

"If, when the pedicle is left in the abdominal cavity, the suppuration and sloughing are equal to what I observed on the outside, and there is no reason to suppose that there is any difference, then I am disposed to think that it would be always better to proceed as I did in the present case, *for there must be danger when the pedicle is left within the body, not only of peritonitis, but of purulent absorption.*"

Many authorities might be quoted, and facts cited, to show the importance of this method of dressing the stump. In case the pedicle is too short for this method of dressing—certainly a very great calamity, if it cannot be remedied—Dr. Jules Worms suggests that the separation be made "at the inferior portion of the cyst itself, so as to obtain by this artifice a more lengthy pedicle."

We have repeatedly referred to the danger to life from hemorrhage. Statistics show that at least twenty-five per cent. that die do so from hemorrhage, and we are inclined to believe that many thus die, and the cause is attributed to collapse. Dr. Bradford, speaking upon this point—the extensibility and contractility of the pedicle as a source of hemorrhage—says:—

"That part of it which is most extensible, when it does contract, is apt to slip through the ligature, and still, without close examination, look as though all was right. Once, on turning the stump of a pedicle up to see if it was bleeding, *I saw a part of the pedicle contracting within the ligature.*"

To prevent this, the manner of fixing the pedicle adopted by Prof. Byford seems the best adapted. Jules Worms mentions the same dressing, which fact escaped us on the first reading. He says: "The lower sutures pierce the extremity of the pedicle, which is thus very securely maintained at the surface of the abdomen."

We might cite many of the best authorities upon this subject, to show that the method of fixing the pedicle so as to have any discharges from it or any accidental hemorrhage fall external to the body, but we have already exhausted twice the space allotted to us, and we must hasten rapidly to the conclusion of this article.

The method of fixing the pedicle in the wound has generally been called Spencer Wells's method. It, however, did not originate with Dr. Wells. This method of securing the pedicle, and of avoiding the dangers of hemorrhage and of a suppurating stump in the peritoneal cavity, was probably first adopted by M. Langenbeck, in 1851.

The late Prof. H. A. Ackley, of Cleveland, Ohio, made use of a similar method of dressing the pedicle, in 1854 or 1855, and he evidently considered the plan original. Prof. John Delamater, in speaking of this case, says:—

"The doctor *conceived the idea* that if he could place the stump of the ovarian pedicle in such a position that the slough would fall outside of the peritoneal cavity, he should avoid one serious source of after-accident. He, therefore, in dressing the wound, drew the stump of the pedicle through the internal portion of the wound, fixing it in that position by fixing the ligature, by which it was surrounded, in a state of tension sufficient to hold the stump in that position."

The patient died from hemorrhage, and the doctor supposed it was caused by too rapid ulceration of the ligature through the stump, in consequence of the tension of the ligature. This was probably not the cause of the hemorrhage. To our mind, it seems more than probable that the hemorrhage was caused by the retraction of the stump through the ligature. The error was in *fastening* the *ligature*, and not the *stump itself*. Another error consisted in not placing the stump where it could be seen at any time. With Prof. Ackley, the idea of fixing the stump so as to have the slough fall outside of the body was an original conception, though he may have been anticipated; and he was the first in this country, so far as we know, to put the conception in practice. He failed, because the means did not accomplish the end aimed at.

*The manner of adjusting the abdominal incision.*—Since the introduction of metallic ligatures into surgery, they have mostly been used in dressing the incision for ovariotomy. Some have preferred the interrupted suture, and others pins and thread, as in hare-lip. Neither will be found best for all cases. Where the abdominal parietes are thin, the silver pins with steel points are probably, when properly adjusted with the twisted suture, the preferable means of fixing the cut surface in adaptation. Should there be much thickness of adipose matter covering the bowels, it is probable the interrupted suture will be found preferable, unless the pins are curved. Spencer Wells prefers the pins in all cases, and says they act as splints, "preventing any escape of intestine, an accident which has happened by the giving way of ordinary sutures." He also advises that the pins include the cut edges of the peritoneum, by which means he expects to facilitate union and prevent the escape of pus into the cavity of the abdomen. Dr. I. Baker Brown objects very strongly to this, and advises all operators to avoid this recommendation. He thinks it "will be found necessary only to apply sutures through the aponeurosis of the muscles, carefully avoiding any portion of the peritoneum, just as the operator for hare-lip carefully avoids the mucous membrane in applying the pins." He advises that the sutures or pins be inserted at intervals of only half an inch apart. By this means he thinks the ingress of air will be entirely prevented. Jules Worms uses metallic sutures, and says: "They are placed alternately, one superficial, and only including the skin; the other penetrating deeply into the wound, so as to inclose the aponeurosis of the muscles." Others have applied pins or sutures an inch apart, and used adhesive plasters between.

Of the other dressings we make no remarks, as there is no great difference of opinion as to what is proper.

*After-treatment.*—In regard to after-treatment, we shall say but a very few words. Most operators have insisted upon a very restricted diet, amounting almost to total abstinence, and given opium liberally as a means of preventing peritoneal inflammation. It is believed that the dangers to life from inflammation have been greatly overrated. Sufficient nourishment should be given to maintain the vital energies at a point where union of the cut surfaces will not be materially interfered with. It should be remembered that measures calculated to subdue an inflammation *when present*, if the inflammation be *not present*, will *retard the process of healing and union*. This is certainly true of opium. In the three deaths that have occurred to Prof. Cooper, of San Francisco, he says neither of them resulted from peritonitis. Opium should be given sufficient to restrain the bowels for a time—and that end we believe need not be maintained so long as some suppose—and to this end the diet should be of such a character as to yield but little residual matter.

We here leave the subject, with the remark that our object in discussing it is this: There are thousands of readers of the REPORTER in the country, some of whom possibly have not the confidence to perform ovariotomy, and are the more willing not to send away for surgical aid, because they can soothe their consciences with the idea that it is never a justifiable operation. To such, if any there are, we have to say, your duty is not all done unless, before you see your patient die, you give her the choice of surgical aid at your own or other careful hands, guided by a well-informed head. We have not written for old and experienced surgeons; neither have

we proposed a complete article upon the subject. We have thrown out such hints and suggestions as seemed to us judicious, and where doctors differed, we have given our own views as usual, which the reader will only take for what they are worth.

### ADULTERATION OF CAMPHOR.

"According to the *Journal de Pharmacie d'Anvers*, gum camphor is now sometimes met with which is mixed with the artificial (hydrochloric) camphor to a considerable extent. Mr. Dumont gives as a safe reagent the behavior of caustic ammonia toward the alcoholic solutions of such camphor.

"In a tincture of pure camphor a few drops of ammonia produce a slight precipitate, which redissolves on shaking; while in a solution of hydrochloric camphor, or in a mixture of the two, ammonia gives a flocculent precipitate, which does not redissolve, and which increases in volume in proportion to the amount of such adulteration."—*Druggists' Circular.*

### FUCUS VESICULOSUS AS A REMEDY FOR OBESITY.

"M. Duchesne Duparc strongly recommends this plant as a means of diminishing an uncomfortable tendency to obesity. He reports three cases in which its use was attended by a decided diminution in weight, without any other appreciable effect. In one case, the loss was from twelve to fifteen pounds in about two months; in another, the diminution in weight was thirty pounds in three months; in a third, there was a decided relief from the discomfort under which the patient had long labored, but the record is incomplete. The remedy is best administered in the form of alcoholic extract, of which there may be taken as much as three or four grammes daily. Great care should be used in the collection of the fucus, as it is easily confounded with other marine plants, which are entirely inert, so far as the peculiar efficacy of the vesiculosus is concerned."—*Boston Med. and Surg. Journal.*

### BELLADONNA IN INCONTINENCE OF URINE.

Professor A. Jacobi, in a lecture in the *American Medical Monthly*, says:—

"Incontinence of urine is another of the troublesome affections, which are, in almost all cases, easily removed by the administration of belladonna. From the almost regular effect it has, we must conclude that the majority of cases depend on increased irritability of the bladder, which is relieved by the administration of the narcotic. * * *There has not been a single case in which the medication proved unsuccessful.* A complete cure was generally obtained in half a week or a week, by doses of the same strength, or a little less, than those given in hooping-cough."

In hooping-cough, in infants of six or eight months old, he prescribes a sixth of a grain of either the root or the alcoholic extract, three times a day; children of three or four years old, half a grain the same number of times a day. He says that these doses, although large, in proportion, for adults, are not attended with any danger; and that their effect on the pupil or brain will hardly ever be perceptible.—*Cincinnati Medical News.*

### THE POTASSIO-TARTRATE OF IRON IN RHEUMATISM.

"Rheumatism is a disease which, while it usually resists all the ordinary modes of treatment, will sometimes be found to succumb to one not commonly employed and probably little thought of. Dr. Willshire, (see *Lancet* of January 11th, 1862,) at the Charing Cross Hospital, lately succeeded in successfully treating a case of this description, the pains of which were extremely erratic, by the medicine to which attention is now drawn. The patient was a somewhat pallid girl, twenty years of age; her pains attacking various parts of the body. She had had the disease for three years, and had been subjected to various treatments without effect. She was ordered a mixture containing the potassio-tartrate of iron, which produced a rapid amelioration. The catamenia in this case, it should be observed, were never disturbed. The report of the case concludes that 'in obstinate and suitable cases this excellent preparation of iron should be borne in mind.'"—*British-American Journal.*

### FURLEY'S ALBUMINOUS COATING FOR PILLS.

"At the Pharmaceutical meeting, (held in London, November 6th, 1861,) Mr. Furley, of Edinburgh, exhibited a process for rendering pills tasteless, by a coating of albumen, etc. which he had patented. The process is carried out in the following manner: Two saucers are employed; the inner surface of one is coated with albumen, prepared by well agitating the white of an egg; the other contains a fine powder, composed of equal parts of sugar and tragacanth. The pills to be coated are placed in the first saucer, and are made to revolve in it by a series of circular motions communicated by the hand while the saucer is held horizontally. This speedily coats them with a thin film of albumen, when they are quickly transferred to the other saucer, in which they are again caused to revolve and become coated with the powder of sugar and tragacanth. The peculiar tenacious consistence of the albumen tends to prevent the pills from getting a very thick coating; but it is sufficient, if continuous, to fix on their surface sufficient of the powder to form a thin but firm and tough coating when dry. The quantity of albumen to place in the saucer is soon learned by trial, and should not be in excess, lest the pills get too heavy a coating, and thus dry too slowly. The ready solubility of the albuminous coating in the gastric juice is a great advantage in this agent. Mr. Furley requires of each pharmaceutist in Great Britain a fee of five dollars for a perpetual right to use his patent process."—*Amer. Journal of Pharmacy.*

THE MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SATURDAY, MAY 10, 1862.

## THE COMPENSATIONS OF WAR.

However calamitous in many respects a state of war, and especially civil war, is to a nation, it is never unaccompanied by some incidental good. It gives employment to large numbers of men, stimulates many branches of manufactures and trade, and is undoubtedly instrumental in advancing the cause of civilization. The fighting nations of the world, especially where fighting is attended by conquest, have become its civilized nations. They have made a start in civilization during a state of war, which has been taken advantage of during the prevalence of peace, so that the most warlike nations have, at the same time, become the most civilized and enlightened. It was so with the ancient Assyrians and Egyptians, the Israelites, the Greeks and Romans, the Gauls, and last, and most important of all, the Anglo-Saxon, which has been pre-eminently a fighting race.

In speaking thus, we do not wish to be understood as advocating war, but simply as asserting a fact, which is apparent to every one who studies history: viz., that, in the economy of Providence, war and civilization have been very closely allied. It would be very easy to show that the present war, which is devastating our country, laying waste farms, villages, towns, and cities, and, above all, destroying the lives of thousands of our citizens, is serving the cause of civilization and of humanity in more respects than one; and that principles of far greater consequence to the welfare of mankind in general, than are the lives and property lost to this nation, are in process of being established, while many minor lessons are being learned by us as a nation which, in a state of peace, we would not have learned. In very many things theory is fast giving way to stern fact, and many a wordy and profitless debate in our legislative halls, and in the daily walks of life, will, ere this war ends, receive a solution that the most obtuse will be able to perceive without an argument to demonstrate it.

Our own profession will receive its full share of incidental benefit from this war. As a profession we have advanced, step by step, until, with all their superior advantages, we have rivaled that of the European nations. Now, we hesitate not to say, we shall outstrip them. The exigencies of the times have called into service thousands of the most intelligent physicians and surgeons in our country, and given them active and remunerative employment in a field where all their powers and intelligence will be stimulated to increased activity. Opportunities are afforded for studying disease, especially acute disease, in all its forms, and surgical injuries of all kinds, aside from those received in battle, are of daily occurrence in armies comprising a million or more of men. Thus an impetus is given to medical and surgical studies and observation in one year, which could not have been acquired in the life of a generation during times of peace.

In sanitary and statistical science, too, our profession must inevitably advance during the progress of this war. We already anticipate the results in giving New York not only her Metropolitan Health Bill, but an efficient State Sanitary Police; Massachusetts her Health Law; this and other States laws that shall save to the nation as many lives in one year as this war shall cost it, even though it should last for years—and despite the successes of the government forces, we sometimes fear that it will have to last years before we shall have learned all the lessons it is intended to teach us.

Some questions in statistical science suggest themselves in connection with this war. The mortality in the male sex, in consequence of the war, is greatly augmented. How is nature's great law, that the number of males and females shall be about equal, to be observed? Will there be an increased number of male births? Or will there be an increased mortality in the female sex? Or will other countries lend us their aid in this work of compensation by sending us a larger proportion of male than female emigrants in comparison with former years?

Our profession will find many things in the progress of the war calculated to stimulate inquiry, and we trust that they will improve the opportunity with all diligence, and not fail to record their observations and experience.

## EDITORIAL NOTES AND COMMENTS.

*An Incident.*—As illustrative of the feelings of our citizens toward those who are wounded in the service of their country, we would mention an incident that occurred at one of our wharves a few days ago. A boat containing some Ver-

mont troops who were wounded in a recent engagement near Yorktown, and were on their way home, had occasion to stop for a short time at one of our wharves. As soon as it became known in the neighborhood, supplies of all kinds, from oranges to fresh Delaware shad, were poured in upon them in profusion. Dinners that were prepared for families were sent to the boat, market women left their stalls, taking the best with them as a free-will offering to those who had been disabled while fighting to maintain the government. It at length became necessary for the surgeons on the boat to interfere to prevent things that were unsuitable being given to the sick and wounded. They reported that but for their interference, "the Philadelphians would have killed the soldiers with kindness."

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*The Military Hospitals in this City.*—In a recent visit to some of the military hospitals in this city, we were very favorably impressed with their general management. Neatness, order, and comfort were manifest. The soldiers are well provided with the necessaries, comforts, and even luxuries, required to make the tedium of hospital life as agreeable as it can be made. In a medical point of view the provision for their wants is ample, and for their ordinary wants they have no lack, as what is required in the way of comforts and luxuries on the bed of sickness, that is not provided by the ordinary hospital allowances by government, is bountifully supplied by the liberality of our citizens.

Many a poor soldier will leave the hospitals of this city with feelings of heartfelt gratitude for the kind care and attention of our hospital surgeons and of our citizens.

In conversation with the soldiers we found that they belonged to various States. Many of them were men of intelligence, and all agreed that, as comfortable as they were in their hospital quarters, they longed to be on the tented field again. The prevailing diseases seemed to be typhoid fever and rheumatism. Some of the men had been for months in hospital, their constitutions not having been equal to the exposures and hardships they encountered in camp and on the march.

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*The Doses of Narcotics.*—A writer in the *Druggists' Circular*, in commenting on an article entitled "Notes on Narcotics," published in the Reporter, by Mr. Edward Parrish, of this city, flatly denies the assertion that the salts of morphia are ever prescribed by physicians in as large doses as a grain at a time. The writer states that he is an apothecary, residing in the vicinity of the pharmaceutical establishment of Mr. Parrish, but *has never seen a prescription ordering a grain of morphia at a dose.*

We believe that a grain of morphia is a dose that is very frequently given by practitioners, and, to an adult, can almost always be given with safety. Such prescriptions are certainly not uncommon, and in occasional instances, as in extreme nervous irritation, tetanus, insanity, delirium tremens, etc., morphia is sometimes given in even larger doses. Some authorities, as Pereira, admit having given *two* grains of morphia at a dose. Dr. Gross, in his "System of Surgery," vol. i. p. 517, referring to the use of morphia after operations, says:—

"By a full dose of morphia, I mean not less than *one grain;* a smaller quantity than this would only serve to fret and worry the patient, instead of composing him. In cases of unusual severity, I do not hesitate to give *twice that quantity*, never forgetting that excessive suffering always establishes a certain amount of tolerance to the use of anodynes."

Mr. Parrish's remarks on the use of narcotics have attracted much attention, and been generally copied in medical and pharmaceutical journals, and we have confidence in the correctness of his observations.

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*Municipal Hospital.*—Since the old buildings of the City Hospital were vacated some years ago, a mansion house on Islington Lane has been used for infectious diseases, but was not well adapted for the purpose. The subject is now being agitated in Councils, of erecting suitable buildings, and it is proposed to appropriate $40,000 for the purpose. As the building is much needed, we hope that the measure will succeed.

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# CORRESPONDENCE.

## Domestic Correspondence.

### ANÆSTHETICS IN MILITARY SURGERY.

Hartford, Connecticut, May 1, 1862.

Messrs. Editors:—In your number for April fifth is an article headed "Fatal Anæsthesia," cautioning against the use of chloroform. It is a matter of the highest interest for the surgeon to know exactly what is the best agent for produc-

ing anæsthesia. I have been exceedingly cautious in the use of anæsthetics—in fact perhaps too much so, for otherwise the first application of these agents in capital operations would probably have been by myself, having been on intimate terms with Dr. Horace Wells, the discoverer of their efficacy, and seeing his success, had been disposed to make more extended trial of them two years before the experiments in Boston. Since his discovery was established, the profession has been divided in opinion both as to the propriety of their use and the best agent. Having on the whole decided that they are useful, let us see which is the most advantageous. The result of the use of chloroform in the Crimean war was eminently satisfactory, apparently all that could be desired; but the experience of surgeons does not warrant the conclusions from thence deduced, as many cases have certainly proved fatal under the most guarded administration. Chloric ether has sometimes been substituted, but unless in combination with sulphuric ether or chloroform it has not succeeded well in my hands, and has been laid aside. Sulphuric ether alone occasionally answered my purpose, but often failed; patients under its influence have not appeared to me as tranquil as when under chloroform, and sometimes it has produced no sensible effect when given to the extent of several ounces.

In this last class I have been obliged to resort to chloroform to accomplish my object. Nor can it be said that sulphuric ether is free from danger. In a patient of my own, where its use was not pushed to its utmost power, inability to converse, with partial paralysis of the tongue, followed, and continued for a week, showing a serious impression had been made upon the nervous system. In another instance, in the hands of a distinguished surgeon, its use was attended by fearful consequences, exciting in his mind great alarm for two days. Another argument against the use of sulphuric ether is the delay necessary in getting the patient under its influence, always to the surgeon the most tedious part of the operation. This is not, however, to be considered of weight, if the article is really so much superior in other respects to everything else, as is claimed by some, nor is the fact that it is very unpleasant, to be allowed much consideration, as these are of minor importance when life is at risk. I abandoned the use of simple chloroform many years ago, except where other anæsthetics failed, or where I was urged to use it by other surgeons or the patients themselves, having seen reported many fatal cases from its use, and having seen threatening symptoms in one of my own patients.

It would help us in arriving at a conclusion, which was on the whole the best of these two agents for general use, or the best in any particular case, if we knew exactly their respective modes of operation on the system. Do they each act in precisely the same manner? To me it appears that they do not; the sedative effect of chloroform on the heart is much greater than that of ether when given in moderate doses. Ether appears to act directly upon the blood, and indirectly upon the brain, the blood being very black when flowing from the dissevered arteries, and evidently poorly decarbonized; while with chloroform the impression would appear from its suddenness to be more direct upon the nervous system. Sulphuric ether, in moderate doses, while it tends to produce anæsthesia excites the pulse; while chloroform producing anæsthesia seems to depress the vital power, sometimes to the point of fatal paralysis of the nerves supplying the heart and lungs.

If, now, anæsthesia can be produced with less exhaustion than results from the use of pure chloroform, or more speedily and effectually than from the use of simple sulphuric ether, it appears to me we should have attained our object, viz., safety and efficacy. Actuated by this reasoning, correct or not, I was early led, even before the combination was in use, so far as I know of, certainly before publicly known, to employ these articles in combination, the proportion being one of chloroform to two or three of sulphuric ether, according to the irritability of my patient. This proportion has been found abundantly successful, and I have relied upon it now for many years, having employed it in many severe and protracted operations; and I cannot recall an unpleasant symptom, except in a very few instances of females, where a hysterical condition has lasted for an hour or two, and in one instance in a very irritable man, who was having his knee straightened after partial anchylosis; a somnolent condition persisted on several occasions in a light degree for several days. It would give me pleasure to get the views of practical surgeons upon this combination, one now chiefly used in the neighborhood where I practice. It does appear to me that the injurious effects of one article are counterbalanced by the other, while both are acting as anæsthetics, thus

requiring much less of each than would be necessary if used alone. So far as my knowledge extends, embracing my own practice and that of others, the effect of the combination (used at once on mixing) has been all that could be wished for. In some instances, where persons were not susceptible, it has been necessary to push the inhalation even to the extent of stertor, yet in no such instance has the least unpleasant after-effect resulted. Used in this method, chloroform will deserve more praise than it has hitherto obtained, for alone it is certainly a dangerous article.

In closing, permit me to say that my experience coincides with that of Dr. Porter, U.S.A., who stated that in the Mexican war he found anæsthetics, particularly sulphuric ether, tend to produce hemorrhage. I have received a letter, this day, from the Pittsburg battle-field, from a surgeon who deplores the almost inevitable fatal result of amputations, as they are rapidly followed by secondary hemorrhage. In my own cases often many more ligatures are necessarily applied than were requisite prior to the use of anæsthetics, although secondary hemorrhage has been rare. Anæsthetics must be used with more caution in an army hospital, since they necessarily poison the blood, already in a poor condition, and little able to react against the formidable injuries for the relief of which severe operations are requisite. In such I suspect chloroform will prove best. P. W. Ellsworth, M.D.,

*Late Brig. Surg. U.S.A.*

## Army Correspondence.

Floating Hospital of Pennsylvania Volunteers,
Near Yorktown, April 29th, 1862.

Messrs. Editors:—The apparent speedy approach of a great conflict, and the daily occurrence of skirmishes, have hastened the preparations for the reception of the wounded in the floating hospitals. The turning of steamboats into hospitals has required much labor, and the materials necessary for the care and treatment of a large number of patients have been gathered and brought here after evidently much forethought on the part of Surgeon-General Smith, to whom our Commonwealth is indebted for the origin and practical efficiency of this humane expedition. Already a number of severely-wounded men have been promptly brought here from the field where they fell, and are now receiving care and medical attention on the hospital vessels. The wounded at the capture and destruction of the rebel battery, on Saturday last, were all brought here on the same day. A characteristic of the location of the wounds of these men is that most of them are in the lower extremities, and the same location of wounds by rifle-balls has been repeatedly noticed in the recent skirmishes.

The preservation, by antiseptics, of the dead bodies of Pennsylvania soldiers and sending them to their friends, is not an unimportant part of the duty performed under the direction of Surgeon-General Smith, and some saddened households have lately had their grief mitigated by looking once more on a familiar form and face.

The agent of the Sanitary Commission has freely offered supplies for the floating hospitals, but this orginazation is so complete in itself, and so supplied with materials brought here from Philadelphia, that it does not appear to me that any extraneous aid can be needed.

I hear of frequent patriotic offers of services from medical men to the government in aid of the wounded who may be suffering on this peninsula; but unless the government determines better the status of such volunteer surgeons, and prescribes their field of duty, and makes provision for their maintenance, their services cannot, it seems to me, be of utility. Organizations of medical men, under the authority and direction of the surgeon-generals of the different States, with financial resources to carry out their benevolent objects, and whose intention is to aid the regular army medical department in the care of the wounded, are, I think, the best plan of volunteer medical aid. A number of medical men from Massachusetts have arrived in the vicinity of the camp near Yorktown, but their services have not thus far been of utility; and their position in the camp is a peculiar one, and, to them, certainly not agreeable. Several medical practitioners from the City of New York, some of them surgeons of the New York and Bellevue Hospitals, arrived at Fortress Monroe two weeks ago, and have been since then wandering about the neighborhood, wasting their time, and have not yet even had a sight of the army.

The surgeon-general of the State of New York, Dr. Vanderpoel, has energetically labored to secure accommodations for wounded men belonging to regiments from that State, and has, I believe, secured a large steamboat for the pur-

pose. From the earnest manner in which Surgeon-General Vanderpoel is exerting himself in this difficult undertaking, I have no doubt of his success; but he has not been empowered by his State with sufficient resources for the thorough accomplishing of the object.

A steamboat under control of the Sanitary Commission, to be used as a floating hospital, has arrived near to the encampments.

There are now few patients lying in the vicinity of the camps. With the object of having room for the wounded who may in great numbers be brought in at any moment, the sick and wounded are sent to the floating hospitals or to the hospitals at Fortress Monroe. The latter institutions are of an extensive character. The Hygeia Hospital has now three hundred and eighty-two patients. Among the gunshot injuries to be seen in that hospital, are some which are very formidable. The most of them are wounds from rifle-balls and shells.

Secondary hemorrhage seems to be a very frequent occurrence from the wounds inflicted by conical rifle-balls. Even when no large vessel has been wounded, extensive sloughing in the track of the ball often involves principal trunks, requiring ligation. I witnessed the difficulty of the attempt to ligate the brachial artery in the vicinity of a wound under such circumstances, when the parts were swollen and infiltrated with blood. The operator, after a tedious dissection, failed to find the artery near the wound, and was obliged to continue his incision far up into sound tissue to secure the vessel. Under similar circumstances I witnessed the rare operation of ligature of an intercostal artery.

In the military hospitals but little attention seems to be given to exsections of joints for gunshot injuries. The dogmas of Macleod on this subject, which American surgeons should not, in favorable cases, too readily accept, seem to deter our surgeons from frequently thus attempting to save life and limb.

If I mistake not greatly, neither the science nor the art of military surgery will be much the gainer by this war. The war will certainly not be sufficiently prolonged to allow of great statistical results, and in the scattered field over which the war is spread the personal experience of few individuals will be very extensive. Of those whose opportunities for observation are good, some may lack the spirit which is required in an army surgeon to labor under the difficulties which surround him in the prosecution of science. And it is true that, although our army has in high positions some surgeons of ability, it appears to me that their administrative duties and many responsibilities will so preoccupy their minds that but little time will be left to them for scientific observation.

From such a surgeon as Dr. F. H. Hamilton, whose name has been for years associated with the literature and teaching of military surgery, and whose prominent position in the army gives him the best opportunities for observation, the profession will certainly expect some really valuable records of his experience.



## NEWS AND MISCELLANY.

*A New Army Hospital in this City.*—The new army hospital in the Twenty-fourth Ward has been commenced, and will soon be finished. It is situated between Mill Creek, near the Baltimore Turnpike, and Spruce Street. The structure will consist of twenty-one one-story lantern-roofed wooden buildings, arranged in four groups, and in form of a parallelogram, 450 by 560 feet, about a central building to be used for offices, doctors, etc. Grass plots, 50 feet wide, will separate the groups, and plots, 25 feet wide, the individual sheds; yet, by means of two pavilion corridors, and the central building, there will be a covered connection between them all. Each ward will be 150 feet long, 25 feet wide, and 14 feet high, and will contain fifty beds. As the buildings will run north and south, there will be no greater exposure to the sun on one side than on the other. The hospital will be situated on high ground, and a culvert will be built both north and south of the buildings, which, with a descent of over fifty feet toward Mill Creek, will furnish a drier foundation than can be generally obtained in town. The hospital will be about a mile from Gray's Ferry, so that wounded soldiers arriving from the South can be taken from the cars at that point and removed at once over a soft road to their beds.

*Cruelty at Hanwell Asylum.*—Despite of the extreme care displayed generally in securing the mildest treatment of the unfortunate victims of mental alienation, it is found difficult sometimes to insure the same on the part of the keepers or domestics of the asylums. A deplorable instance of brutal treatment, attended with death, has lately been disclosed at the Hanwell Asylum, which formed the subject of a coroner's inquest. The unfortunate patient's name was Matthew Geoghegan—the keeper's name, Jones; and it was deposed to that he was accidentally seen by two spectators to kick the poor lunatic three times while lying on the ground; he then beat him on the back with a shovel, and drew him by the legs into the middle of the room. He then

mounted on the deceased, and walked backward and forward on him. He then took hold of his legs, dragged him to the doorway, and twisted him round by the heels. Jones finally took the unhappy man by the head, knocked it three or four times on the stone floor, and kicked him two or three times on the bottom of his belly. Drs. Begbie and Jephson, the medical officers of the asylum, at the inquest, testified to the existence of most extensive bruises, one especially of a peculiar shape on the abdomen, which exactly fitted the heel of a boot. The unfortunate man was very much paralyzed. The bruises gradually subsided, but he was very weak, and never recovered.

To add to the infamy of this outrage, it appears that the patient was "very imbecile and troublesome, but *not violent*." The medical evidence at the inquest could not connect in a direct manner the cause of death, which was pleuro-pneumonia, with the injuries inflicted by the keeper, so the jury could not bring in a verdict of manslaughter. It is too bad, however, that in one of the most important lunatic asylums in England, such brutal practices could obtain, and the perpetrators of them go "unwhipt of justice." The *Lancet*, from which we have abridged the foregoing, very properly observes in its concluding remarks: "It is difficult to conceive that a man capable of such a brutal outrage, could have generally conducted himself to the patients under his care with the humanity which ought to be insured to them, or to suppose that the first offense publicly proved is also the first committed against them. The recurrence of such exceptional horrors must stain the character of the institution at which they occur, and the justly profound impression which such exposures produce, involves in a general censure all the authorities of the asylum. It is said the authority of the medical superintendent over the subordinate officers is unwisely restricted. If this is the case, the responsibility for such deplorable events as have recently occurred must rest elsewhere."—*British-American Journal.*

*Military Hospitals in Cincinnati.*—The *Medical and Surgical News* says that there are at this time, in Cincinnati, four large hospitals, devoted exclusively to sick and wounded soldiers: namely, one on Lock Street, known as the Marine; one on Fourth, between Main and Sycamore; one on Third; and one on George, between Baymiller and Freeman. Dr. — Moore, Assistant Surgeon U. S. A., we believe, has charge of these. At the Marine Hospital, he is assisted by Dr. E. Williams; at the Fourth Street Hospital, by Dr. J. B. Smith; at the Third Street Hospital, by Dr. J. A. Murphy; at the George Street Hospital, by Drs. David Judkins and Wm. B. Davis. Each of these gentlemen receives one hundred dollars per month compensation for his services. Besides these hospitals, there are soldiers at the Commercial Hospital, St. John's, and St. Mary's. The number of patients now on hand we are not informed; we presume it is constantly varying. Some two or three weeks ago, there were at the Fourth Street Hospital, under Dr. Smith, 215; there had been received into the house, 312; of this number, twelve had died. A large increase in the present number will doubtless take place from the wounded in the late battle at Pittsburg, Tennessee. We understand that hospital accommodations will be fitted up at Camp Dennison, a few miles from the city, to meet the necessity.

## OBITUARY.

At a meeting of the Medical Board of the Hospital of the Protestant Episcopal Church of Philadelphia, held on the 24th ult., the following minute was ordered to be placed on record:—

*Whereas* it has pleased God to remove from our midst our esteemed friend and colleague, Henry E. Drayton, M.D., late President of this Board; and *Whereas* it is proper that the Medical Board of the Protestant Episcopal Hospital, with which he was usefully associated from the earliest organization of that institution, should give some expression of its feelings on this melancholy occasion; therefore

*Resolved*, That while we bow in submission to the Divine will, we yet mourn the loss of the firm friend, the man of science, the skillful associate, whose kind and disinterested ministrations will long live in the memories of the afflicted inmates of the institution.

*Resolved*, That his untimely death has cut short a career which gave promise of great benefit to the science of medicine, and through it to the world at large.

*Resolved*, That we regard that man as not having lived in vain who has done what he could to alleviate the miseries of his fellow-men—and this our lamented friend did.

*Resolved*, That in offering to his family this tribute to the memory of the deceased, we feel how inadequate words are to convey our real estimate of his worth; that we sympathize with them in their bereavement, and trust they may find consolation in His mercies who alone can heal the wounded heart.

*Resolved*, That a copy of these resolutions be transmitted to the family and the Board of Managers.

Signed by the officers of this Board.

William Maybury, M.D., *President.*
R. S. Kenderdine, M.D., *Secretary.*

## Vital Statistics.

Of Philadelphia, for the week ending May 3, 1862.

Deaths—Males, 129; females, 128; boys, 67; girls, 65. Total, 257. Adults, 125; children, 132. Under two years of age, 78. Natives, 193; Foreign, 64. People of color, 14.

Among the causes of death, we notice—Apoplexy, 3; convulsions, 8; croup, 5; cholera infantum, 0; cholera morbus, 0; consumption, 44; diphtheria, 8; diarrhœa and dysentery, 1; dropsy of head, 3; debility, 22; scarlet fever, 9; typhus and typhoid fever, 7; inflammation of brain, 13; of bowels, 5; of lungs, 18; bronchitis, 0; congestion of brain, 10; of lungs, 3; erysipelas, 0; hooping-cough, 5; marasmus, 8; small-pox, 6.

For week ending May 4, 1861.....254
" " April 26, 1862.....286

Population of Philadelphia, by the census of 1860, 568,034. Mortality, 1 in 2210·2.

Of New York, for the week ending May 5, 1862.

Deaths—Males, 208; females, 193; boys, 118; girls, 107. Total, 401. Adults, 176; children, 225. Under two years of age, 152. Natives, 282; Foreign, 119; Colored, 8.

Among the causes of death, we notice—Apoplexy, 8; infantile convulsions, 19; croup, 8; diphtheria, 10; scarlet fever, 26; typhus and typhoid fevers, 4; cholera infantum, 3; cholera morbus, 0; consumption, 73; small-pox, 14; dropsy of head, 21; infantile marasmus, 15; diarrhœa and dysentery, 1; inflammation of brain, 15; of bowels, 5; of lungs, 27; bronchitis, 7; congestion of brain, 14; of lungs, 3; erysipelas, 15; hooping-cough, 3; measles, 1: 218 deaths occurred from acute disease, and 13 from violent causes.

For week ending May 6, 1861.....386
" " April 28, 1862.....377

Population of New York, by the census of 1860, 814,277. Mortality, 1 in 2030·6.